Meeting Summary

eHealth Technical Working Group
December 30, 2009 12:00-1:30PM

Please refer to the meeting slides for additional information. Note that to improve readability and understanding, some of the group's discussion is summarized thematically below rather than chronologically.

Review of HIE Core Services Model (Slides 3-9):
(Please refer to the 12/22/09 meeting summary and slides for detail.) Last week's discussion of a model for HIE in California introduced some HIE-related terminology, including *communicant* (aka actor or principal), *enterprise* (which can group communicants and at times be a communicant itself), and *HIO*. An initial set of core services, such as *registry, authentication, routing, and data standards*, could be used when needed for HIE between communicants. Of note is that in this model, these core services need not necessarily be used, but rather are available to be accessed when needed (such as when an HIO is not available).

Numerous communication patterns can be envisioned that involve various configurations of communicants, enterprises, and HIOs. These patterns may include communication that involves the statewide HIE core services (red arrows in diagrams), as well as communication that does not involve these core services (green arrows).

In addition to core services, certain *operating rules* would need to be defined and enforced. For instance, it could be proposed that every communicant must have registry and routing entries, and that the ability/willingness of a communicant to engage in a specific HIE transaction is independent of doing so for other types of HIE transactions.

Comments on HIE Core Services Model:
David Bass pointed out that portions of the HL7/ISO EHR functional model appeared to address many of the concepts being examined by the group. In particular, the information infrastructure component of the functional model could be relevant. Walter agreed that it was a good idea to review the HL7 functional model for relevant portions of overlap with the current model so as to avoid reinventing the wheel. On the other hand, it should be viewed as a reference point rather than a standard to which the current model has to conform, since there had not been any discussion to his knowledge about using the HL7 functional model as the basis for achieving meaningful use.

There were no additional thoughts or comments on the model. Walter then asked participants on the call whether anyone would take issue with the initial draft of the technical architecture being based on this set of core services and the model that had been discussed at the last call and just reviewed. No objections were raised, and there was general consensus that the model presented up to this point had been on target and appropriate. *David Bass desired to undertake a review of the model in context of the*

HL7 functional model, and agreed to do so within the next week. Dave Minch stated that the proposed model seemed to be consistent with the HL7 functional model to his recollection, and suggested moving forward.

Dave Minch then mentioned that he and Rim had done some preliminary work outlining recommended services derived from an analysis of meaningful use requirements. One document, posted on the TWG Project Space, is an analysis of the functional requirements of shared services for achieving meaningful use, while a second document (not currently on ProjectSpaces) builds on this and outlines the technical requirements for shared services that would be necessary to support the necessary functionality. *As an action item, Dave, Rim, Walter, and Peter will follow up to locate and discuss these contributions.*

Additional State HIE Services and Private HIE Shared Services(Slides 10-12):

After briefly reviewing the various 2011 meaningful use functions for context (Slide 10), Walter then expanded the model by introducing the notion of other state HIE shared services that, while not core services, nevertheless would be important to the functionality of a statewide HIE architecture (Slide 11). He proposed that as a principle, the other state HIE shared services would necessarily be accessed through the state HIE core services in order to simplify the way that communicants interact with these shared services. Walter then described Private HIE shared services, which differ from other state HIE shared services in that they are not centrally coordinated. Examples of such services may include untethered PHR products, secure messaging infrastructures, disease registries, SureScripts, etc. These services would be reached either through usage of core services or through other means as deemed appropriate by a particular HIO, enterprise, or communicant.

The following points were raised around this model.

- Dave Minch strongly disagreed with requiring the use of HIE core services to access other state HIE shared services. He pointed out that several of the shared services listed on the slide (e.g., immunization registries, NHIN gateway) already had direct connections with individual communicants/organizations. For instance, HIOs would access an NHIN gateway directly in order to communicate with other HIOs, and would not need to access state HIE core services to do so. Dave argued that a key rationale for having shared services is to allow users to utilize those services according to their needs. Creating a single pipe to those services will make it more difficult for certain organizations to access the endpoints of interest, which would lead them to simply finding other ways to communicate with each other instead of through the statewide architecture. In his view, the architecture should avoid requirements that would necessitate substantial rework or retrofitting on the part of organizations. It also didn't seem to make sense for the use of state HIE core services to be optional yet on the other hand require the use of core services to access other state HIE shared services.

- Walter appreciated the point raised about whether access to the other HIE shared services should require the use of HIE core services, either in the short- or long-term. Dave posited that if the core services are useful, they will be used; however, requiring use is an unnecessary restriction that takes away the possibility of organizations being able to utilize less expensive

alternatives to connect should they exist. Dave Handren stated the importance of not eliminating alternative ways to connect to the other shared services, offering as an example the physician who might connect to an immunization registry manually via a web portal or in an automated fashion via an EHR accessing the registry through core services.

- Eileen Moscaritolo added that it would be useful for an EHR to be able to support provider work flow by automatically connecting to various resources in order to retrieve relevant information about a patient, e.g. insurance eligibility, immunization schedules, etc. Walter commented that core services would be useful in simplifying access and authentication to these shared services, and thus there could be value in requiring access to go through core services. Dave Minch countered that while there is certainly value in doing so, he fundamentally disagreed that core services be required in order to access other shared services. Eileen and Dave Handren also voiced that this should not be required.

- Walter agreed that this was a very good consideration, while also acknowledging that a benefit of centralizing access to these resources would be to prevent there from being a fragmentation of access paths that impede health information exchange. For example, there is a single immunization registry in a given region, and instead of having multiple ways to access that registry, it would make sense to have a single way to access that registry. Walter explained that without coordination, a communicant would likely need to access different services in different ways and with different login information. Centralizing access through core services would help to consolidate access mechanisms, which would be advantageous. Dave Minch agreed with this, noting that the whole idea of authentication as a core service is to create a link point where individual circles of trust can be connected through a common trusted party. Core registry and authentication services would allow communicants to locate data trading partners and also to authenticate their identity at the state level via a federated model, providing a mechanism whereby any data trading partner can find and connect with any other data trading partner.

- Dave raised the issue of whether representing immunization registries and public health reporting databases in the cloud as shared services is appropriate, since they are actually communicants. Walter responded that the state benefits from the coordination, centralization, and control of certain resources, including immunization registries and public health databases, which are supported by the state. Additionally, these resources are key components of meaningful use. Therefore, they are considered part of the other state HIE shared services cloud as well as being communicants.

- Walter suggested that, given the concerns expressed, the other state HIE shared services might also be reached by various means at least in the short run, rather than only through the HIE core services, although the latter approach had value. Dave Handren agreed that there was indeed value in creating a single pipe and eliminating redundancy, noting that today there are many

different interfaces that are employed by organizations to various shared services. One possibility raised was to put a timeline on a date by which HIE shared services would need to be accessed via HIE core services, which Eileen pointed out was not different from other mandates that she has seen to use health information technology.

- Dave Handren suggested that the state HIE core services would comprise a central directory of communicants (perhaps a UDDI service), listing the services they provide, the interoperability mechanism, endpoint location, etc. This directory would inform a would-be communicant of what was necessary to communicate with another communicant, e.g. an immunization registry. Eileen Moscaritolo stated that the immunization registries would likely be willing to modify existing interfaces in favor of a standard mechanism of interaction with other communicants, whether this directly or through an HIO. Dave Handren clarified that such a mechanism would be listed in the services directory for others to discover.

- Jeff Evoy asked whether it should at least be required for all entities to be entered into the statewide registry, so that they are known and reachable by the state HIE infrastructure. At this point, a distinction was made between requiring the use of state HIE core services and requiring that every potential data trading partner's information be in the registry. Walter pointed out that as currently defined, being in the registry would entail costs to the organization, as it would require being provisioned and credentialed to provide assurance and trust that the entries in the registry are authentic. One option could be to make being in the registry voluntary, enabling organizations to weigh the cost-benefit of being visible to the state HIE infrastructure. Dave Handren believed that many organizations would not be prepared to pay the costs of provisioning and credentialing, but that perhaps a simple listing service might be a viable alternative in the near term.

It was agreed that the group would revisit this important discussion in the future in order to address what operating rule(s) should be put in place as part of the technical architecture.

<u>Services Architecture in the Context of Meaningful Use Scenarios (Slides 12-13):</u>
Walter then reviewed the proposed straw man architecture model in view of various meaningful use scenarios for illustrative purposes.

1. E-prescribing: SureScripts, which could be considered a private HIE Shared Service, provides a mechanism to exchange e-prescribing data between providers and participating pharmacies. In many cases, the connection to SureScripts would not need to go through the state HIE infrastructure. For the roughly 25% of pharmacies that do not participate in SureScripts, the solution may be an additional shared service, or alternatively the answer may not be technical but instead be a funding, policy, or regulatory solution. Regardless of the most appropriate solution, the model architecture would support it. In addition, organizations that have their own solutions, e.g. an IDN, may again use their own communication channels without involving the state HIE infrastructure.

Dave Minch asked whether SureScripts was indeed a service, or instead a company providing a solution. He wondered whether it made more sense to elucidate component services necessary for e-prescribing and to support those instead of focusing on a particular provider of services. Walter clarified that the architecture could support additional services deemed necessary for e-prescribing where there currently was a gap in coverage. He replied that in his view, SureScripts was a private HIE service. Eileen Moscaritolo agreed with this assessment.

2. E-lab: Given the current state of HIE services around lab results, there may be benefits to using parts of a state HIE infrastructure. For example, a lab could utilize core authentication, routing, and registry services to identify and correctly route lab results to a practice, or alternatively a lab data routing hub service could be developed. An unsolved challenge is independent labs, e.g. hospital labs, and encouraging them to support standards and develop connectivity to community physician practices, which is expensive and challenging today. The solution may include the development of a shared service such as a lab data routing hub, or to create a policy requiring hospitals to be able to output HL7-compliant messages with LOINC codes.

   Dave Handren stated that standardization with LOINC was probably not practical in the near future. He also noted that there are HIOs that are attempting to offer "last mile" services with respect to lab results such that results from any lab can be delivered electronically to the provider. He could not see how such a service could be offered at the state level, given the inherent difficulties of patient identification. Walter responded that the state HIE infrastructure would want to complement existing HIO activity by filling in the gaps where HIO-provided services were unavailable. While how to do this remains to be determined, the proposed architecture should be able to support whatever the solution might be. Walter asked whether anything was missing from the architecture that needed to be added. There were no suggestions voiced by participants.

3. Clinical Summary Sharing: In the case where providers belong to organizations such as IDNs and HIOs that already have mechanisms to communicate between providers, the state HIE infrastructure need not be used. In the more general case, it may be useful to utilize state HIE core services in conjunction with other private services to share clinical summary documents. For example, a communicant may choose to use a secure messaging service that can interface with the state HIE core services to route a data standards-compliant message to a recipient that has been located in the registry and whose identity has been authenticated. In another scenario, two physicians with EHR systems that are interfaced with the state HIE infrastructure may communicate directly with each other using core services.

4. Population Health: state HIE core services could be invoked to allow information to flow from disease registries to providers. If a statewide MPI was to be developed as a shared service (taking into account the difficulties in doing so), this could be leveraged to enable the submission of patient level data to disease registries.

5. Patient-Centered Care: providing patients with electronic copies of and access to their health data can be supported using the state HIE core services along with additional state and/or state HIE shared services. Instead of consumers having core registry entries (which leads to them having access to all other registry entries), one possibility would be to have a separate consumer registry shared service that enables a provider to send records directly to a consumer. Another possibility would be for a physician to send records to a PHR service on behalf of a patient, also utilizing the consumer registry and an additional consent service.

6. Public Health Reporting, Quality Reporting, Administrative Simplification: due to time constraints, participants were asked to review the proposed straw man architecture in light of these scenarios on their own.

Walter summarized that the general feedback from participants on the call could be characterized as refinements to the model, as opposed to any objection to the model as being inappropriate. There were no disagreements from the group regarding this conclusion.

Next Steps:

1. Participants were asked to provide any additional feedback on the model as well as thoughts on specific technologies/methodologies that could be of use at the next level of detail via the discussion list or to Walter or Peter directly.
2. Dave Bass will undertake and complete a review of the straw man architecture in view of the HL7 functional model.
3. Walter and Peter will follow up with Dave Minch and Rim Cothren regarding a document that they
4. The next meeting will be on 1/6/10. Technical details of core services will be discussed at that time.

Summary of Key Questions/Issues/Decision Points:

- There appeared to be general agreement among meeting participants that the proposed HIE core/shared services model is appropriate for supporting meaningful use to the level of detail that it has been elaborated thus far.
- Should there be a requirement that all communicants must use state HIE core services to access other state HIE shared services? Feedback on the call suggests that this may be unnecessary and undesirable.
- Should there be a requirement that all communicants must have an entry in the core services registry? Should this requirement apply to all potential data trading partners in the state, or only to those who choose to access/be accessible by the state HIE infrastructure? Should such a requirement involve provisioning and credentialing?

Members Present

Dave Bass	CA Dept. of Health Care Services
Scott Cebula	Independent
Scott Christman	CA Dept. of Public Health
Paul Collins	CA Dept. of Public Health
Jeff Evoy	Sharp Community Medical Group
Dave Handren	Long Beach Network for Health
Daniel Haun	Adventist
Dave Minch	John Muir Health System
Eileen Moscaritolo	CalOptima
Anthony Stever	AWS Consulting / Redwood MedNet
Jim Thornton	MemorialCare
Ben Word	CA Dept. of Health Care Services

Staff Present

Name
Walter Sujansky
Tim Andrews
Peter Hung